

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Ser. No.:	Filed:	Inventor(s):	Atty Dkt:
09/740,242	18 Dec. 2000	J. Varani	100UM-012 (1718-012)
Title: Method for Protecting and Restoring Skin Using Selective MMP Inhibitors			
Examiner: L. Channavajjala		Art Unit: 1615	

Mail Stop Amendment
PO Box 1450
Alexandria, VA 22313-1450

RESPONSE

Dear Sir:

In complete response to the Office action mailed 19 December 2007, the period for response being extended to 19 June 2007, reexamination and reconsideration of the subject application, pursuant to and consistent with 37 C.F.R. § 1.104 and § 1.112, and in light of the following remarks, are respectfully requested.

Double Patent Rejections

In connection with the rejection of claims 8-15 over various patents, a terminal disclaimer is filed herewith, thereby obviating this rejection.

Rejections under 35 U.S.C. §112, first paragraph

The rejection of claims 8-15 for failing to comply with the written description requirement is respectfully traversed.

The rejection is confusing. At page 6 (third line from the bottom) the rejection alleges that the specification does not describe what compounds possess the claimed properties, but on page 7 (middle) the rejection acknowledges that three such compounds are disclosed. The rejection alleges there is no description of these

compounds, yet acknowledges that the compounds are identified by number with respect to those described in the Whittaker *et al.* publication, and at page 11 (ln. 10-21) of the specification those three compounds are described with reference to specific journal publications or research compound numbers (e.g., Ro. 32-3555; a Google search for "Ro 32-3555" pulls up references to PubMed and *Nature*, among others).

Accordingly, these compounds exist, and the specification enables one of ordinary skill in the art to understand what the compounds are. Further, the rejection acknowledges that applicants have provided a rationale for using those compounds, and so there is a written description of the invention. The rejection does not explain *why* one of ordinary skill in the art would not recognize what has been invented and claimed. *In re Spina*, 975 F.2d 854, 24 USPQ2d 1442 (Fed. Cir. 1992). There is no requirement for any examples, *In re Borkowski*, 442 F.2d 904, 164 USPQ 642 (CCPA 1970), *Ex parte Morey*, 66 USPQ 191 (POBA 1944). Especially where the established chemical (or, in this case, physiological) principles are acknowledged by the Office to accurately reflect what applicants' assert is invented, examples are not required. *Ex parte Ulfstedt*, 122 USPQ 392 (POBA 1958). Accordingly, the rejection based on an alleged lack of a written description should be withdrawn.

The portion of the rejection relating to an alleged lack of enablement is respectfully traversed. As noted above, the three specific compounds described in the specification are known in the art, they are known in the art as selective MMP inhibitors, and the rejection acknowledges that various other UV, acne, and chronological aging treatments are described in the art. Yet the rejection does not explain *why*, given this knowledge, one of ordinary skill in the art could not make suitable topical compositions.

"An inventor need not, however, explain every detail since he is speaking to those skilled in the art." *In re Howarth*, 654 F.2d 103, 105, 210 USPQ 689, 691 (CCPA 1981). "Not every last detail is to be described, else patent specifications would turn into production specifications, which they were never intended to be." *In re Gay*, 309 F.2d 769, 774, 135 USPQ 311, 316 (CCPA 1962). "That some experimentation is necessary does not preclude enablement; the amount of experimentation, however, must not be unduly extensive." *Atlas Powder*, 750 F.2d at 1576, 224 USPQ at 413. See also *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1557, 220 USPQ 303, 316 (Fed. Cir.), *cert. denied*, 105 S. Ct. 172

(1984); *In re Angstadt*, 537 F.2d 498, 503, 190 USPQ 214, 218 (CCPA 1976).

DeGeorge v. Bernier, 768 F.2d 1318, 226 USPQ 758, 762 (Fed. Cir. 1985).

Given that the Whittaker *et al.* article describes, in a very straightforward way, the selectivity of 139 different compounds with respect to inhibiting different MMPs (by determining the mere concentration of any given compound needed to inhibit a particular MMP), the rejection fails to show or explain why undue experimentation would be required to practice the claimed method. Applicants are not claiming as novel an particular compound or genus of compounds having the characteristic of being selective for any particular MMP; such compounds are known and others can be determined by simple testing (concentration versus inhibition yes/no?; analogous to a titration). Even given the three particular compounds mentioned in the application, the rejection does not provide a basis for why the method of using of any of those particular compounds is not enabled, or why it would take undue experimentation to use any of them in the claimed method of applying (at least) one of them to human skin. Accordingly, this rejection should be withdrawn.

Obviousness Rejections

Claims 8-15 stand rejected as obvious over US 5,837,224, US 6,130,254, US 6,683,069, US 6,630,516, US 6,919,072, “and” US 7,141,238. This rejection is respectfully traversed.

The instant claims differ from each of the above references, singly or in combination, by requiring the selectivity inhibition of MMP-1 versus MMP-2 and/or MMP-9.

In the ‘224 patent note Figs. 5B and 5E (the 72kDa gelatinase is MMP-2 and the 92kDa gelatinase is MMP-9; see application at page 3, and Whittaker *et al.* at p. 2737), in which inhibition of MMP-2 and MMP-9 is successful for inhibiting photoaging. Accordingly, this teaching is contrary to the claimed method.

In the '254 patent, note Figs. 11A, 12, and 13C-13D, showing that UV radiation induces MMP-2 and MMP-9 with the intent of inhibiting its action (e.g., Fig. 15A). Again, this is contrary to the claimed invention.

The '069 and '238 patents and both directed to preventing a reduction in collagen biosynthesis and require the application of a retinoid. There is nothing to suggest reducing the deleterious effects of inhibiting MMP-2 and/or MMP-9 as claimed in this application.

The '516 and '072 patents are directed to chronological aging in skin. Note Figs. 4B and 4C, and the accompanying disclosure, showing that these enzymes are more prevalent in aged skin and teaching, therefore, it would be beneficial to inhibit them.

Accordingly, none of these citations teach or suggest the selective inhibition presently claimed. Pages 2766-2768 of the Whittaker *et al.* article describes various disease models in which MMPs are active, but none of these related to photoaging or chronological aging of human skin. Absent experiments such as described in this application, and based on the cited art's teaching to inhibit all of the MMPs induced by photoaging or chronoaging, it would have been unexpected that any advantage could be obtained by selectively inhibiting MMP-1 versus MMP-2 and/or MMP-9. Accordingly, this rejection should be withdrawn.

Respectfully submitted,

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